Improving the Quality of Scientific Journals:
Insights from Nature

8th Asian Science Editors' Conference
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Jeffrey Robens, PhD
Head of Community Engagement
About me…

**Researcher** for 20 years

USA, Singapore, & Japan

**Trainer** for 12 years

Over 600 workshops in 35+ countries
Leveraging the expertise at Nature, we support the research community to achieve their goals.
Improving the quality of scientific journals
Steps in improving quality

1. Improving visibility

2. Filtering the best work of those submitted
Steps in improving quality

1. Improving visibility

2. Filtering the best work of those submitted
Journal promotion & networking

Authors will not submit to your journal if they don’t know your journal
Personal promotion

Editors and editorial board members should be promoting the journal

- Colleagues
- Collaborators
- Conferences

• Talking about the journal (reputation)
• Soliciting articles and reviews
Personal promotion

The importance of your Editorial Board

The more diverse your Editorial Board is internationally, the **broader** your promotion will be.

Ensure your Editorial Board members are in regions with **high growth** and familiar with the **emerging trends** to maximize their impact.
Network with potential authors
Networking with potential authors

An interesting case study…

Started in 1990, independently published

Indexed in SCI-E in 2001 (IF = 2.1)

Little improvement from 2001 to 2005

<table>
<thead>
<tr>
<th></th>
<th>2001</th>
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<tr>
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<td>1.96</td>
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In 2006, published by Nature Publishing Group

Hired new editor from Cell Press, Dangsheng Li

Two major changes

• Hired full-time editorial staff (paid for by SIBS)
• Active promotion at conferences and institutions
  – Establish **confidence** and **trust** in the journal
Cell Research

Talk to researchers about their study and offer **valuable advice** for improvement

- **Promote** the journal (Receptive)
- **Not** promote the journal (Not receptive)
Cell Research

2023 JIF = 28.1
Personal promotion

Invite reputable researchers are reviewers

Send invitations when you receive a nice submission that matches their interest

Even if they decline, you have had the opportunity to promote your journal!
Many opportunities for personal promotion!
What about online promotion?

How many of you are already promoting your journal’s articles online?
Promoting on social media

Does promoting articles online increase visibility?

Randomly chose 68 articles from Mayo Clinic Proceedings
Promoted 34 on social media
Tracked page views and downloads for 30 days

<table>
<thead>
<tr>
<th></th>
<th>Promoted*</th>
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<tr>
<td>Page views</td>
<td>1070 (563–2361)</td>
<td>265 (148–570)</td>
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<tr>
<td>Downloads</td>
<td>1042 (497–2133)</td>
<td>142 (50–335)</td>
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</tbody>
</table>

*Median (IQR); p < 0.001

So be sure to promote those articles!

Emerging trends
Review articles
Reputable authors
Network with reputable researchers online

Offer useful insights on their posts to establish credibility
Steps in improving quality

1. Improving visibility

2. Filtering the best work of those submitted
Importance of peer review
Peer review

Most scientists regarded the new streamlined peer-review process as “quite an improvement.”
Choosing reviewers

One of our most important responsibilities
Choosing reviewers

One of our most important responsibilities

✓ Subject and technical expertise
Choosing reviewers

One of our most important responsibilities

✓ Subject and technical expertise
✓ Fair and constructive
Choosing reviewers

One of our most important responsibilities

✓ Subject and technical expertise
✓ Fair and constructive
✓ No conflicts of interest
Editors

Our in-house editors are PhD-level scientists with research experience. All in-house editors work full-time for the journal to oversee the review process, handle manuscripts as primary editors, liaise with our Editorial Board Members and enforce journal policy. Editors also engage in other activities on behalf of the journal, such as attending and organizing conferences and meeting with scientists at their institutions.

In-house editors work closely with our Editorial Board Members to ensure that all manuscripts are subject to the same editorial standards and journal policies.
Case study

**communications materials**

- Academic editor chose 3 reviewers who were *collaborators* (i.e., editor and reviewers have all published together)
- Resulted in 3 very **similar** reviews
- In-house editor stepped in and suggested a fourth unrelated reviewer to keep the peer review process **fair** and provide another **viewpoint**
Be willing to **overrule** a reviewer’s comment if you feel it is unnecessary or biased.
Choosing reviewers

One of our most important responsibilities

- Subject and technical expertise
- Fair and constructive
- No conflicts of interest
- Pays attention to detail, but sees the big picture
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Editorial evaluation & decisions
How editorial decisions should be made

Don’t count votes, but consider arguments

Strong arguments should carry more weight in editorial decisions

Thorough Objective Evidence

Shallow Biased Weak claims
Common criteria for acceptance

- Within journal’s scope
- Novel / original
- Relevant for the field
- Trending topic(s)
Identifying trends

Be predictive on which papers will be useful and interesting for the field.
Evaluating trends

Bibliometric trends

- Publication trends
- Submission trends
- Download trends
- Citation trends

Identify topics & regions of interest
Evaluating trends

Bibliometric trends

Conferences

- Posters
- Slide talks
- Q&A sessions
- Discussions
Evaluating trends

- Bibliometric trends
- Conferences
- Discussions with Editorial Board
Evaluating trends

- Bibliometric trends
- Conferences
- Discussions with Editorial Board
Common criteria for acceptance

- Within journal’s scope
- Novel / original
- Relevant for the field
- Trending topic(s)
- Robust study design
- Conclusion supported by evidence
Avoid theoretical biases

Always consider other **perspectives** that are accepted by a portion of the community and should be represented/heard.
Nice editorial about mitigating bias

How to curb bias in manuscript assessments

https://www.nature.com/articles/s41551-023-01104-3
Importance of fair manuscript assessment

Authors, reviewers, & editors can have different perceptions about what is a fair assessment.

Editors should determine suitability for peer review based on technical & editorial evaluations.

Consistent application of predetermined criteria to all manuscripts, regardless of name or institution.
Common sources of bias

Limited **specialization** can lead to over-reliance on intuition, name recognition, or amount of data.

High **workloads** may prompt editors to prematurely reject manuscripts on subjective preferences.

Unconscious **preconceptions** about topics, techniques, or institutions can influence decisions.
Strategies to curb bias
Awareness

Be *aware* of potential biases
Openness

Be open to alternative perspectives and feedback
Be **transparent** with the decision-making process.
Improving the quality of scientific journals

Be strategic, be fair, and be passionate
Any questions?

Thank you and good luck!

Dr. Jeffrey Robens
Head of Community Engagement
jeffrey.robens@nature.com